

**CLAIM AMENDMENTS**

1. (currently amended): A recombinant DNA molecule which comprises an expression cassette wherein said expression cassette comprises a nucleotide sequence encoding a T-type calcium channel  $\alpha_{1G}$  subunit, said encoding sequence operably linked to control sequences to effect its expression; wherein said  $\alpha_{1G}$  subunit has an amino acid sequence ~~at least 99% homologous~~ identical to SEQ. ID. No.: 24 or has an amino acid sequence identical to SEQ. ID NO. 37.

2. (previously presented): The DNA molecule of claim 1 wherein said  $\alpha_1$  subunit has the amino acid sequence of SEQ. ID NO. 37.

3. (canceled)

4. (previously presented): Recombinant host cells modified to contain the DNA molecule of claim 1.

5. (original): The cells of claim 4 which are mammalian cells.

6. (previously presented): A method to effect production of a recombinant functional calcium channel which method comprises culturing the cells of claim 4 or 5 under conditions wherein said functional calcium channels are produced.

7-13. (canceled)

14. (currently amended): An isolated nucleic acid molecule which comprises a nucleotide sequence encoding a T-type calcium channel  $\alpha_{1G}$  subunit or its full-length complement, wherein said  $\alpha_{1G}$  subunit has an amino acid sequence ~~at least 99% homologous~~ identical to SEQ. ID. No.: 24 or has an amino acid sequence identical to SEQ. ID NO. 37.

15-17. (canceled)

18. (currently amended): The isolated nucleic acid molecule of claim 14, wherein said  $\alpha_{1G}$  subunit has ~~[[the]]~~ an amino acid sequence ~~[[of]]~~ identical to SEQ. ID NO. 37.

19. (currently amended): The DNA molecule of claim 1 wherein said  $\alpha_1$  subunit has ~~[[the]]~~ an amino acid sequence ~~[[of]]~~ identical to SEQ ID NO: 24.

20. (previously presented): Recombinant host cells modified to contain the DNA molecule of claim 2.

21. (previously presented): The cells of claim 20 which are mammalian cells.

22. (previously presented): Recombinant host cells modified to contain the DNA molecule of claim 19.

23. (previously presented): The cells of claim 22 which are mammalian cells.

24. (previously presented): A method to effect production of a recombinant functional calcium channel which method comprises culturing the cells of claim 20 or 21 under conditions wherein said functional calcium channels are produced.

25. (previously presented): A method to effect production of a recombinant functional calcium channel which method comprises culturing the cells of claim 22 or 23 under conditions wherein said functional calcium channels are produced.

26. (currently amended): The isolated nucleic acid molecule of claim 14, wherein said  $\alpha_{1G}$  subunit has ~~[[the]]~~ an amino acid sequence ~~[[of]]~~ identical to SEQ ID NO: 24.